

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum)

Box No. I TITLE OF INVENTION

RADIO CONTROLLED BOAT

Box No. II APPLICANT

☒ This person is also inventor

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

BARRETT CLIVE VERNON
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Applicant's registration No. with the Office

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:

☐ all designated States

☐ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

BARRETT SUSAN
28 PERKH RD
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SOUTH AFRICA 4276

This person is:

☐ applicant only

☐ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:

ZA

State (that is, country) of residence:

ZA

This person is applicant for the purposes of:

☒ all designated States

☐ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☐ agent

☒ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

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☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No. VIII (iii) DECLARATION: ENTITLEMENT TO CLAIM PRIORITY

The declaration must conform to the standardized wording provided for in Section 213; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iii). If this Box is not used, this sheet should not be included in the request.

Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)):

In relation to this international application,

Clive Vernon Barrett and Susan Barrett
are entitled to claim priority of
earlier application

No 2004/1293

by virtue of the following:

the applicants are the inventors of
the subject matter for which
protection was sought by way of
an earlier application

This declaration is made for the
purposes of the following designations
for national and/or regional patents:
US.

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iii)".

Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purposes of the designation of the United States of America)
The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.

**Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv))
 for the purposes of the designation of the United States of America:**

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26ter).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications:

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: BARRETT, CLIVE VERNON

Residence: RAMSGATE NORTH, KZN, SOUTH AFRICA
 (city and either US state, if applicable, or country)

Mailing Address: P.O. Box 726
MARGATE, KZN, SOUTH AFRICA 4275

Citizenship: REPUBLIC OF SOUTH AFRICA

Inventor's Signature: [Signature]
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: 2 FEBRUARY 2005
 (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

Name: BARRETT, SUSAN

Residence: RAMSGATE NORTH, KZN, SOUTH AFRICA
 (city and either US state, if applicable, or country)

Mailing Address: P.O. Box 726
MARGATE, KZN, SOUTH AFRICA, 4275

Citizenship: REPUBLIC OF SOUTH AFRICA

Inventor's Signature: [Signature]
 (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: 2 FEBRUARY 2005
 (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".

Box No. V DESIGNATIONS

The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.

However,

- ☐ DE Germany is not designated for any kind of national protection
- ☐ KR Republic of Korea is not designated for any kind of national protection
- ☐ RU Russian Federation is not designated for any kind of national protection

(The check-boxes above may be used to exclude (irrevocably) the designations concerned in order to avoid the ceasing of the effect, under the national law, of an earlier national application from which priority is claimed. See the Notes to Box No. V as to the consequences of such national law provisions in these and certain other States.)

Box No. VI PRIORITY CLAIM

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country or Member of WTO	regional application:* regional Office	international application: receiving Office
item (1) 18 FEB 2004 (18-02-04)	2004/1293	ZA		
item (2)				
item (3)				

☐ Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

☐ all items ☒ item (1) ☐ item (2) ☐ item (3) ☐ other, see Supplemental Box

* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)):

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / ... EP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

Box No. VIII DECLARATIONS

The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

		Number of declarations
<input type="checkbox"/> Box No. VIII (i)	Declaration as to the identity of the inventor	:
<input checked="" type="checkbox"/> Box No. VIII (ii)	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	:
<input checked="" type="checkbox"/> Box No. VIII (iii)	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	:
<input checked="" type="checkbox"/> Box No. VIII (iv)	Declaration of inventorship (only for the purposes of the designation of the United States of America)	:
<input type="checkbox"/> Box No. VIII (v)	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	:

Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains:

(a) in paper form, the following number of sheets:

request (including declaration sheets) :

description (excluding sequence listing and/or tables related thereto) :

claims :

abstract :

drawings :

Sub-total number of sheets : _____

sequence listing :

tables related thereto :

(for both, actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (c) below) _____

Total number of sheets : _____

(b) ☐ only in computer readable form (Section 801(a)(i))(i) ☐ sequence listing(ii) ☐ tables related thereto(c) ☐ also in computer readable form (Section 801(a)(ii))(i) ☐ sequence listing(ii) ☐ tables related thereto

Type and number of carriers (diskette, CD-ROM, CD-R or other) on which are contained the

☐ sequence listing:☐ tables related thereto:

(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)

This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):

1. ☐ fee calculation sheet :
2. ☐ original separate power of attorney :
3. ☐ original general power of attorney :
4. ☐ copy of general power of attorney; reference number, if any: :
5. ☐ statement explaining lack of signature :
6. ☐ priority document(s) identified in Box No. VI as item(s): :
7. ☐ translation of international application into (language): :
8. ☐ separate indications concerning deposited microorganism or other biological material :
9. ☐ sequence listing in computer readable form (indicate type and number of carriers)
 - (i) ☐ copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application) :
 - (ii) ☐ (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter :
 - (iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing mentioned in left column :
10. ☐ tables in computer readable form related to sequence listing (indicate type and number of carriers)
 - (i) ☐ copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application) :
 - (ii) ☐ (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater) :
 - (iii) ☐ together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column :
11. ☐ other (specify): :

Number of items

Figure of the drawings which should accompany the abstract:

Language of filing of the international application:

Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).



BARRETT, SUSAN

COMMON REPRESENTATIVE

For receiving Office use only

1. Date of actual receipt of the purported international application:

3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:

4. Date of timely receipt of the required corrections under PCT Article 11(2):

5. International Searching Authority (if two or more are competent): ISA /

6. ☐ Transmittal of search copy delayed until search fee is paid

2. Drawings:

☐ received:☐ not received:

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

TITLE OF INVENTION

10/586385

Patent No. 10/586385

Radio controlled boat

BACKGROUND ART

- 5 A bait boat is a radio controlled vessel to which a fishing line and baited hook are attached and carried out to the middle of a lake, for example, where the distance is too great for the fishing hook to be placed by casting. Similarly salt-water anglers may wish to fish beyond the breakers, and again a bait boat would be a desirable means to achieve this.
- 10 Whilst bait boats for fresh-water fishing are known, these have not been successfully adapted for use in the sea. They tend to topple easily in the waves and are unable to right themselves. As a result they have been found to be ineffective in the sea.
- 15 One of the reasons for their inability to remain upright in swells is that prior art bait boats float atop the water and have super-structures, which are acted upon by the waves, resulting in overturning.
- 20 It is therefore an object of this invention to provide a bait boat which lies low in the water, has little or no superstructure, is submersible and which is further self-righting in the event that overturning occurs.
- 25 It is a further object of this invention to provide a vessel for delivering a detachable life-saving device for both fresh water and salt-water situations. Yet a further object of this invention is to provide a remote controlled life-saving vessel.
- 30 An alternative object of the invention is to provide a remote controlled vessel for housing photographic equipment for use in underwater photography.
- 35 A further object of the invention is to provide a recreational or promotional vessel.

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- 30 An alternative object of the invention is to provide a remote controlled vessel for housing photographic equipment for use in underwater photography.**
- 35 A further object of the invention is to provide a recreational or promotional vessel.**

DESCRIPTION OF THIS INVENTION

AP20 Rec'd PCT/PTO 17 JUL 2006

- 40 According to the invention, a floatable vessel includes a weighted keel having a depth below the waterline substantially greater than the height of the deck above the waterline and a self-sighting mechanism comprising a lightweight float mount at one end of the flexible elongate element, the other end of the elongate element being attached to a biasing means secured to the deck of the vessel, wherein, in the event of the vessel capsizing, the force of the water on the keel and the force of the self-righting mechanism and the longitudinal axis of the vessel act together to right the vessel.
- 45 In the preferred form of this invention, the ratio of the depth of the keel to the height of the deck above the waterline is greater than or equal to 5:1. The weight of the keel is greater than normal due to the location of the motor and its components within the keel and comprises the major portion of the weight of the boat.
- 50 Also in the preferred form of the invention, the hull of the vessel includes a deep central keel formation located along the longitudinal axis of the vessel between twin hulls of substantially reduced depth relative to that of the keel.
- 55 In the preferred form of this invention the self-righting mechanism is anchored to a point along the longitudinal axis of the vessel.
- 60 Also in the preferred form the biasing means comprises a coiled stainless steel spring with the elongated element comprising a stainless steel cable and the float a polystyrene ball or air-inflated ball.
- 65 The length of the stainless steel cable or alternatively the height of the float above the deck may be variable, permitting adjustment according to water conditions. A pilot light may be attached to the boat, cable or float for nighttime use.
- 70 The float may be bi-coloured, being divided into different-coloured halves parallel to the longitudinal axis of the boat. This enables an observer to tell from a distance in which direction the vessel is traveling.
- 75 In the preferred form of the invention, the vessel is remote controlled and in particular radio controlled, including a motor controllable by means of a signal transmitted from a remote location and receivable by an antenna located aboard the vessel and in communication with the motor and steering mechanism.
- 80 In this preferred form of the invention the vessel finds application as a bait boat for use by fishermen to quickly and efficiently locate their bait and required distance from the shore. To this end the boat includes a bait tray located towards the rear (stern) of the vessel and further includes a remotely activated flap, which is pivotable to an open position upon receipt of the appropriate signal from the control to release bait into the water.
- 85 In use, the bait boat would typically be remotely steered through the water from the shore, towing with it the bait attached to a fisherman's line, as well as a retrieval line attached to the front of the boat. The retrieval line is preferably a lightweight nylon cord/line and is used to retrieve the boat from the water in the event of engine failure. The retrieval line is payed out from a winch located on shore and is attached to a bow-ring on the boat.

- 90 The line is attached to the bow-ring and looped through the bait tray whilst the boat is being steered out into the water. Upon opening of the bait tray flap to release the bait the retrieval line is also released from the bait tray and when the line is pulled by the winch it automatically turns the bow of the boat around to face the winch.
- 95 The winch is preferably battery operated and housed in a waterproof enclosure. The winch is equipped with a slip-clutch to break the torque of its 25:1 pulley drive ratio. The incorporation of a constant tension brake release mechanism prevents the line from tangling. Whilst the boat can be operated without the retrieval line and winch, this is not ideal as the operator will have no easy way of retrieving the boat from a deep water in the event of mechanical or electrical failure unless the retrieval line is attached to a second reel and rod in which case the boat can be brought safely back to shore.
- 100 A second important feature of the boat is it's ability to submerge or dive under or through approaching waves in the same way that a surfer would push his board an approaching wave to avoid being washed towards the shore.
- 105 According to this second aspect of this invention, the vessel includes a trim tab to enable the vessel to submerge. In the preferred form, the trim tab comprises the stern section of the vessel, which has been lengthened to act as a trim tab. In the preferred form the stern section comprises approximately 1/3 length of the boat. Also in the preferred form, the underside of the trim tab is concavely arcuate to accentuate its ability to dive.
- 110 In the preferred form of the invention the ability of the boat to dive is a function of the length of the trim tab. For a 1m boat, weighing around 15kg the stern length is preferably 333 mm. These factors combine to enable the boat to dive when the speed of the boat is reduced.
- 115 In a modification or improvement of this invention, a bow extension element is releasably securable to the bow of the vessel to limit or extend dive capability. In one form, this comprises a similar shape to that of the bow of the vessel and in its simplest form serves to lengthen the bow.
- 120 In the preferred form of the invention the motor of the boat is comprised as follows:
Two 7.8 amp/hr dry cell batteries wired in parallel are connected through an on-off switch to a 300 amp Mosfet speed controller. This speed controller which operates in the mark space ration basis is connected to a brush motor wound to provide 12 000 rpm at 12 volts. Drive torque is achieved with the use of a 3:1 reduction box, which provides a propeller speed underload of approximately 2500 – 3 000 rpm. This has been calculated using a 110 mm 3-blade rough pitch propeller.
- 125 In an alternative from of the invention in which the vessel may be used as a life-saving apparatus or as a recreational motorized boat, the vessel may be provided with one or more inflatable tubes located about the perimeter of the deck to improve buoyancy. These may be self-inflating. In addition one or more handles may be provided along the length of the deck and/or at the stern to enable persons to grab hold of the vessel and be towed by it.

- 130 A lifesaving apparatus, for example a torpedo buoy, may be fastened to the vessel either using the bait tray or the handle provided.**
- 135 In certain situations it may be less dangerous and more expedient to deliver a buoy to a swimmer in trouble than for a life-saver to reach that person in time. The vessel of the invention is ideal for such a task and may even be employed to tow that person to shore.**
- 140 For reasons of its use in rough surf and to prevent possible damage to the rudder and/or propeller a propeller and rudder guard is provided.**

EMBODIMENT OF INVENTION:

The preferred embodiments of the invention are described below with reference to the accompanying drawings:

Figure 1 is a front view of a boat according to the invention;
Figure 2 is a view of the boat in the water;
Figure 3 is a side view of the boat;
Figure 4 is a top view of the boat;
Figure 5 is a bottom view of the boat;
Figure 6 is a front (bow) view;
Figure 7 is a rear (stern) view;
Figures 8 and 9 are side and top views of the boat adapted for use in life-saving.

- 150 In Figures 1 and 2 a radio controlled bait boat (10) of the invention has a substantially flat deck (12) which is only slightly raised above the water line (14). The boat has twin hulls (16, 18) and a deep and heavy central keel (20). The depth of the keel relative to the exposed height of the deck is approximately in the ratio 5:1 as shown in Figure 3. This results in an extremely stable vessel.
- 155 The weight of the keel is substantial, with the components of the motor being housed therein as shown in Figure 3.
- 160 Attached to the deck (12) is a self-righting mechanism comprising a coiled, stainless steel spring (22) mounted on the longitudinal axis of the deck, a flexible steel cable/whip (24) attached to the spring, with a polystyrene float (26) located at the other end of the whip. The self-righting mechanism operates by acting in conjunction with the weight of the keel to right the vessel when it is partially or fully capsized.
- 165 The float is bi-coloured to enable the observer to establish in which direction the boat is traveling.
- 170 The stern section (28) of the vessel is longer relative to the remainder of the boat and in essence, acts as an oversized trim tab to limit the boat to submerge at certain speeds. The underside of the stern is concave (30) to further adapt the stern to function as a trim tab.
- 175 When the speed of the boat is reduced to approximately one third of its maximum, the trim tab assists to submerge the bow of the boat and cause it to dive. This enables it to dive through oncoming waves. A removable bow extension (31) may be fitted to further assist diving.
- 180 In order to function as a bait boat, the deck includes a bait tray (32) covered by a hatch (34) which is hinged towards the stern of the boat. The hatch is remotely activable to open to release the bait into the water as shown in Figure 2.

- 185 The Antenna (36) receives a transmission from a hand-held radio control (not shown) controlling operation of the motor and the bait tray hatch.**
- 190 The motor and its components are housed within the keel as shown in Figure 3. The motor is powered by two dry cell batteries (38) in parallel, which are connected through an on-off switch to a speed control device (40). The speed control operates a brush motor (42) with a 3:1 reduction box (44) Being used to provide the propeller (46) with the required torque. The propeller and rudder (45) are protected by a guard (47).**
- 200 Turning now to Figures 8 and 9, the boat of the invention is shown to include additional features which will enhance its use as a life-saving apparatus. Handles 48, 50) are provided along the length of the deck and at the stern of the boat (52) fro gripping by a rescued person. Inflatable stabilizer tubes (54) are fitted around the deci and at the stern (56) to provide additional buoyancy.**
- 205 A torpedo buoy (58) or the like may be towed behind the boat and released for a drowning person. Alternatively, a drowning person may grip the handles (48, 50, 52) and be towed toward shore.**

CLAIMS :

1.

A floatable vessel includes a weighted keel having a depth below the waterline substantially greater than the height of the deck above the waterline and a self-righting mechanism comprising a lightweight float mount at one end of a flexible elongate element, the other end of the elongate element being attached to a biasing means secured to the deck of the vessel wherein, in the event of the vessel capsizing or partially capsizing, the force of the water on the keel and the force of the self-righting mechanism about the longitudinal axis of the vessel act together to right the vessel.

2.

A floatable vessel according to claim 1 in which the ratio of the depth of the keel to the height of the deck above the waterline is greater than or equal to 5:1.

3.

a floatable vessel according to claim 1 and claim 2 in which the motor and related components are located in the keel.

4.

A floatable vessel according to any of the above claims in which the weight of the keel comprises the major portion of the weight of the vessel.

5.

A floatable vessel according to any of the above claims in which the hull of the vessel includes a deep central keel formation located along the longitudinal axis of the vessel between twin hulls of substantially reduced depth relative to that of the keel.

6.

A floatable vessel according to any of the above claims in which the self-righting mechanism is anchored to a point along the longitudinal axis of the vessel.

7.

A floatable vessel according to any of the above claims in which the biasing means comprises a coiled stainless steel spring with the elongated element comprising a stainless steel cable and the float a polystyrene ball or air-inflated ball.

8.

A floatable vessel according to claim 7 in which the length of the stainless steel cable or alternatively the height of the float above the deck is variable, permitting adjustment according to water conditions.

9.

A floatable vessel according to claim 7 in which a pilot light is attached to the self-righting mechanism or vessel itself for night time use.

10.

A floatable vessel according to claim 7 in which the float is bi-coloured, being divided into different-coloured halves parallel to the longitudinal axis of the boat.

11.

A floatable vessel according to any of the above claims in which the vessel is remote controlled, including a motor controllable by means of a signal transmitted from a remote location and receivable by an antenna located abroad the vessel and in communication with the motor and steering mechanism.

12.

A floatable vessel according to claim 11 in which the vessel is radio Controlled.

13.

A floatable vessel according to any of the above claims in which the vessel is a bait boat and includes a bait tray located towards the rear (stern) of the Vessel and further includes a remotely activated flap which is pivotable to an open position upon receipt of the appropriate signal from the control to release bait into the water.

14.

A floatable vessel according to claim 13 which includes a retrieval line releasable securable to the bow thereof, the bow including a bow-ring for this purpose, the retrieval line being payed out from a winch located on shore.

15.

A floatable vessel according to claim 14 in which the winch is portable and is mountable upon a trolley adapted for this purpose.

16.

A floatable vessel according to claim 14 in which the winch is battery Operated and housed in a waterproof enclosure.

17.

A floatable vessel according to claim 14 in which the winch is equipped with a slip-clutch to break the torque of its 25:1 pulley drive ration and includes a constant tension brake release mechanism to prevent the line from tangling.

18.

A floatable vessel according to any of the above claims in which the vessel includes a trim tab to enable the vessel to submerge.

19.

A floatable vessel according to claim 18 in which the trim tab comprises The stern section of the vessel which has been lengthened to act as a trim tab.

20.

A floatable vessel according to claim 18 in which the stern section Comprises approximately 1/3 the length of the boat.

21.

A floatable vessel according to any of the claims 18 to 10 in which the Underside of the trim tab is concavely arcuate to accentuate its ability to dive.

22.

A floatable vessel according to any of the above claims 18 to 20 in In which the ability of the boat to drive is a function of the length of the boat, weight of the boat and the length of the stern.

23.

A floatable vessel according to claim 22 in which a boat of one meter in Length, weighing approximately 15 kilograms, the optimum stern length Is approximately three hundred and thirty three millimeters.

24.

A floatable vessel according to any of the above claims 18 to 23 in which the bow extension element is releasably securable to the bow of the vessel to limit or extend dive capability.

25.

A floatable vessel according to claim 24 in which the bow extension comprises a similar shape to that of the bow of the vessel and serves to lengthen the bow.

26.

A floatable vessel according to any of the above claims in which for a 110 mm 3-blade rough pitch propeller, the motor comprises two 7.8 to 9 amp/hr dry cell batteries wired in parallel, connected through an on-off switch to a 300 amp Mosfet speed controller operating in a mark space ration basis and being connected to a brush motor wound to provide 12 000 rpm at 12 volts, drive torque being achieved with the use of a 3:1 reduction box which provides a propeller speed underload of approximately 2500 – 3000 rpm.

27.

A floatable vessel according to any of the above claims in which the vessel is provided with one or more inflatable tubes located about the perimeter of the deck to improve buoyancy.

28.

A floatable vessel according to claim 27 in which the tubes are self-inflating.

29.

A floatable vessel according to claims 27 and 28 in which one or more handles are provided along the length of the deck and/or at the stern to enable persons to grab hold of the vessel and be towed by it.

30.

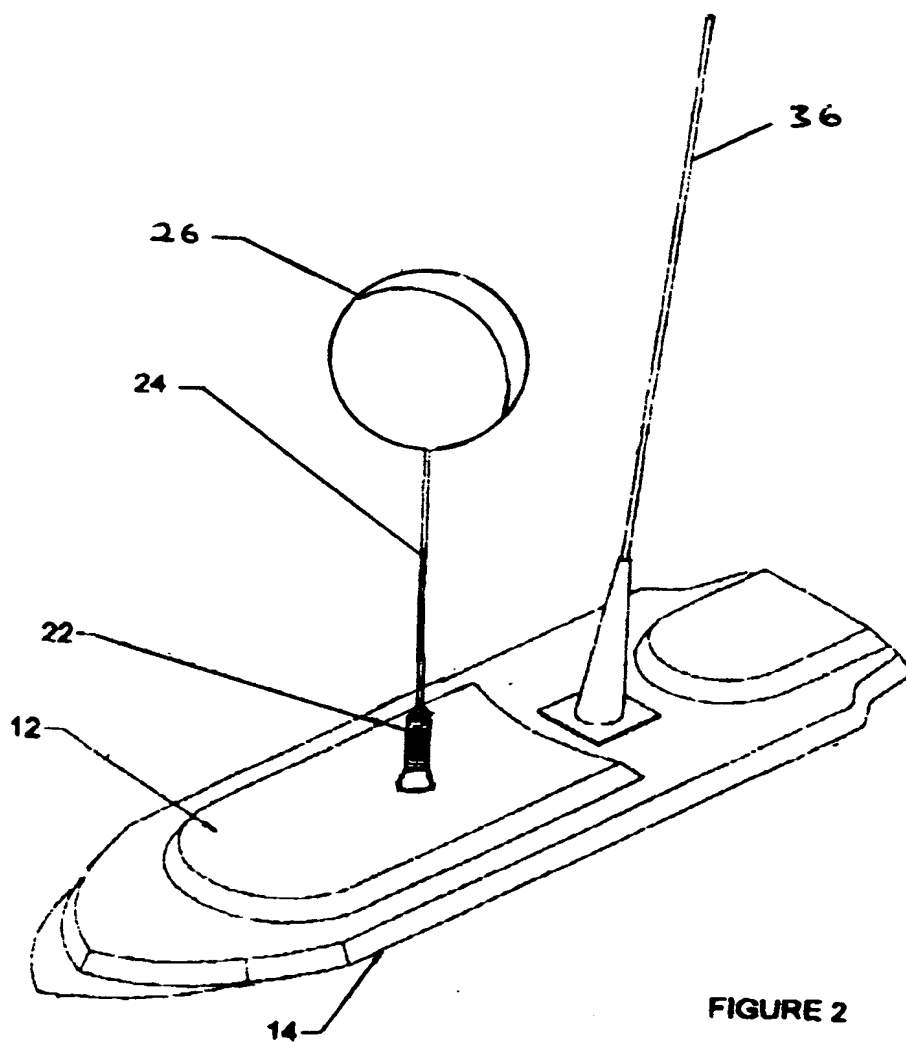
A floatable vessel according to any of the above claims in which the Vessel includes a propeller guard and/or rudder guard.

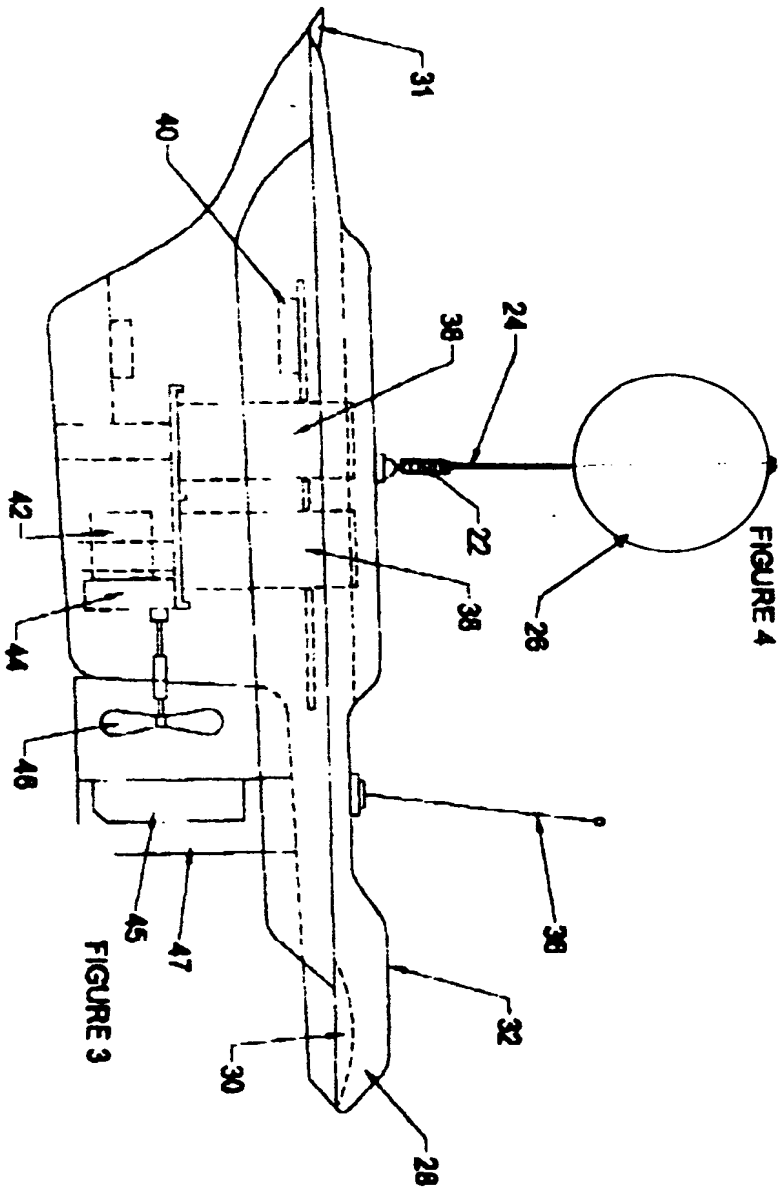
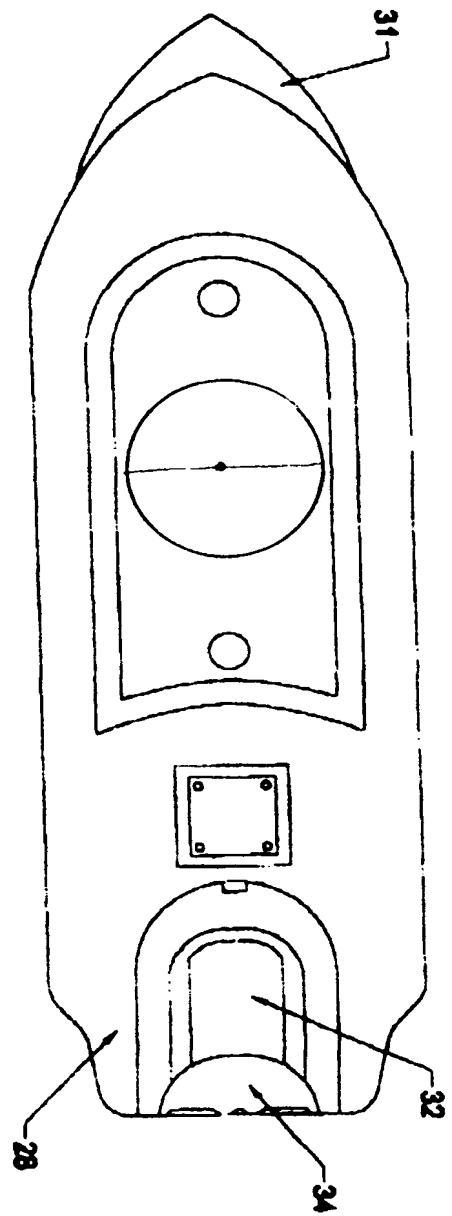
31.

A floatable vessel substantially as described with reference to the accompanying drawings.

ABSTRACT

This invention is a surf-launched, submersible, self-righting radio controlled boat. It is one meter in length, 30cm wide with a draught of 25cm. The boat is electrically powered and operates on two 8amp/hour dry cell batteries which power a 200 watt motor to which a 3:1 ratio reduction gearbox is attached driving a 115mm 3-blade propeller. It is ideal for delivering a baited fishing line up to one km in oceans, dams and rivers. It is ideally used in conjunction with a battery-operated motorized winch whereby a line from the winch is attached to the boat in addition to the fishing line. Once the fishing line has been released, the winch pulls the boat back to shore. Other applications include underwater photography, recreation or life-saving where the boat itself, fitted with handles becomes a motorized life-buoy or the boat can be used to tow a life-buoy to a drowning bather.





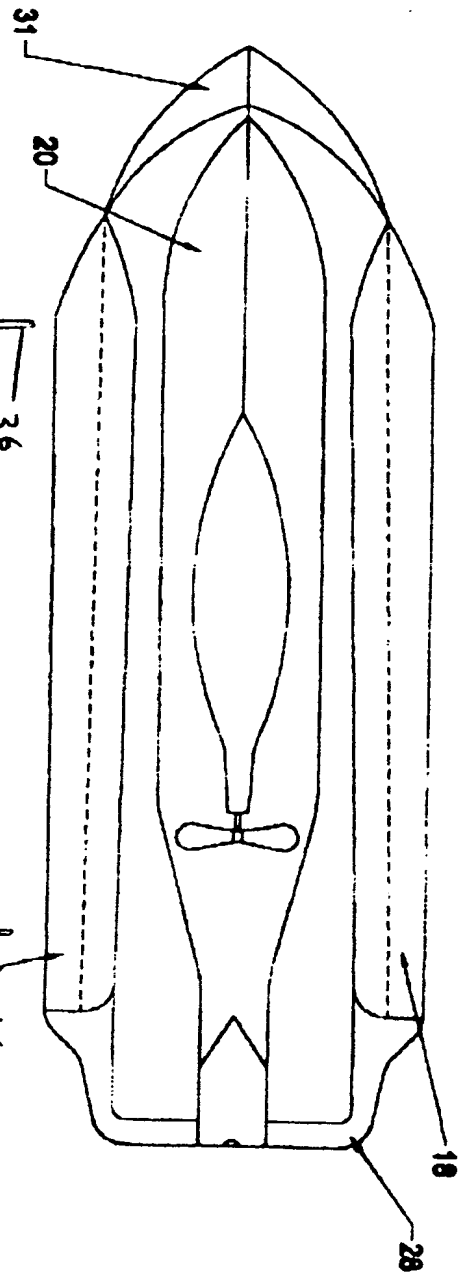


FIGURE 5

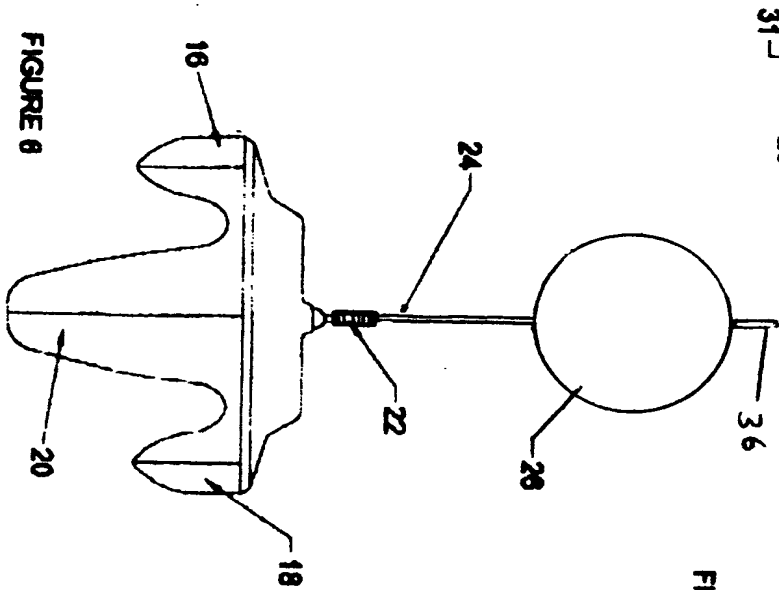


FIGURE 6

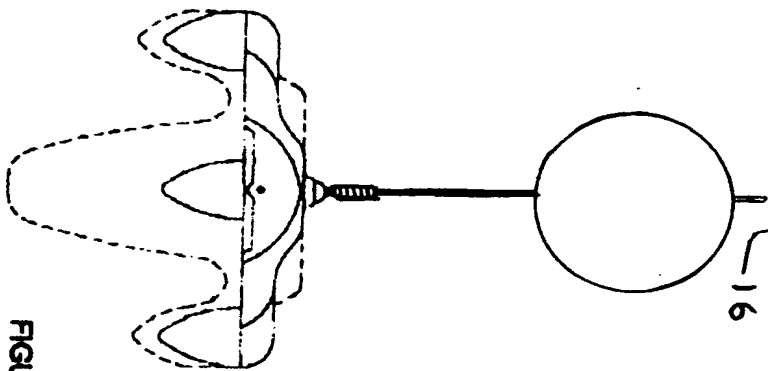


FIGURE 7

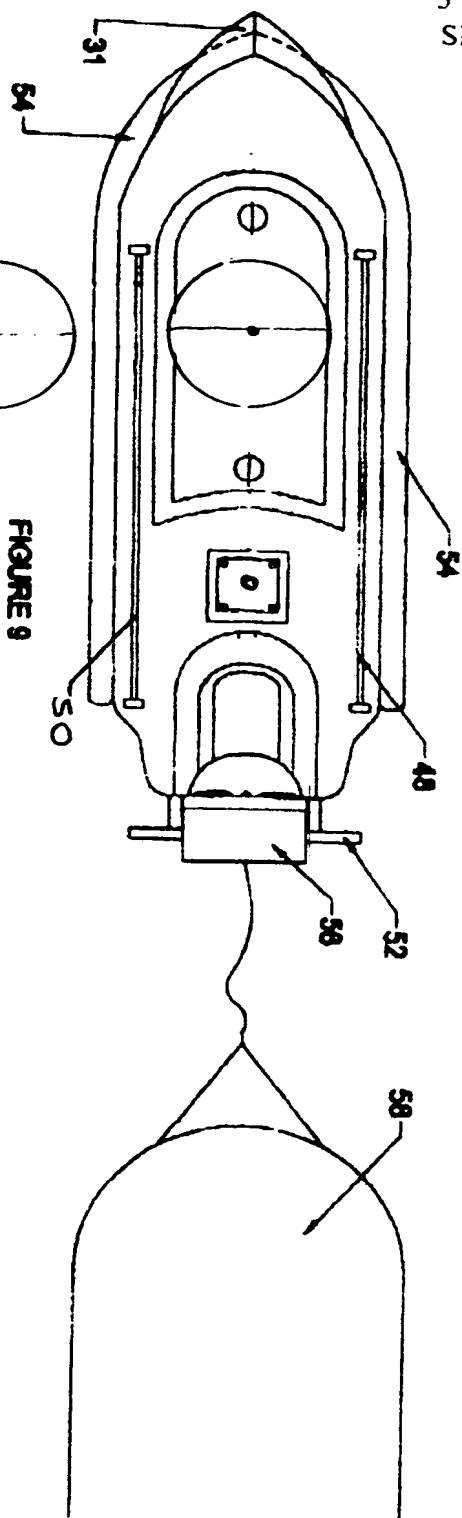


FIGURE 9

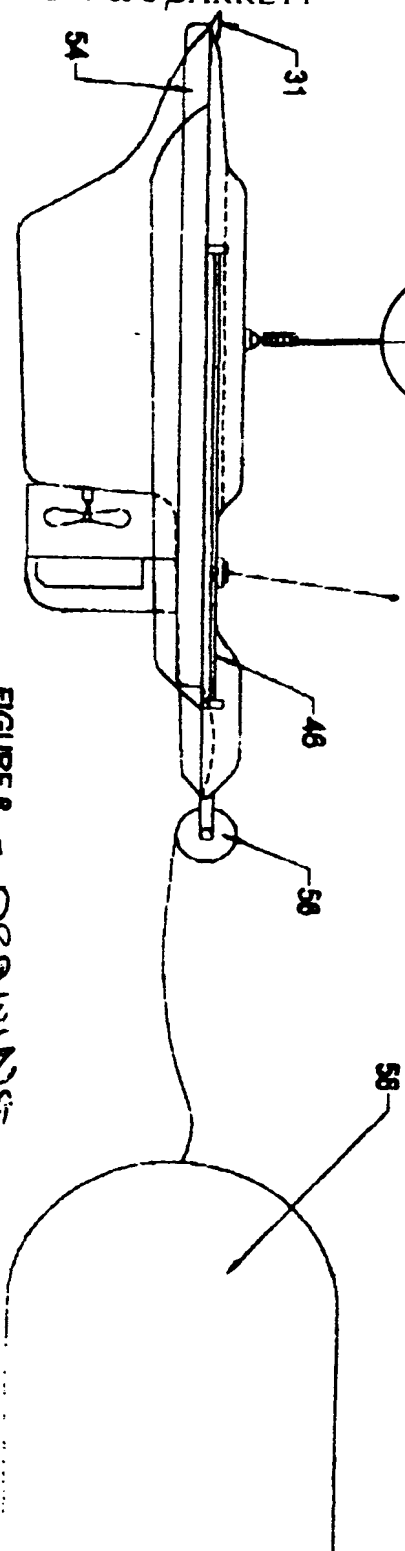


FIGURE 8 - DRAWING
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